

## IN THE CLAIMS:

1        1. A system of active neuro-protection for detecting and arresting  
2        injury to an individual comprising:

3              a sensing means for sensing the occurrence of a predetermined event  
4        within an environment and for operatively transmitting an event indicating  
5        signal;

6              a controller operatively in communication with said sensing means,  
7        wherein said controller includes a processor for processing said event  
8        indicating signal to determine if a predetermined condition is met for releasing  
9        a neuro-protective agent;

10          a dispensing means for releasing a neuro-protective drug, wherein said  
11        dispensing means is operatively in communication with said controller, and  
12        releases said neuro-protective drug if said controller transmits a drug releasing  
13        signal to said dispensing means if the predetermined condition is met.

.1        2. A system as set forth in claim 1 wherein said controller is  
2        operatively in communication with a remotely located computer monitoring  
3        system for remotely monitoring the individual within the environment by  
4        receiving an event indicating signal from the sensing mechanism and  
5        transmitting a drug releasing signal to the dispensing means to release the  
6        neuro-protective drug if the predetermined condition is met.

1        3. A system as set forth in claim 1 wherein said signal is a radio  
2        frequency signal, and said remotely located computer system, said controller,  
3        said sensing means and said dispensing means each includes a transceiver for  
4        transmitting and receiving the radio frequency signal.

1        4. A system as set forth in claim 1 wherein said dispensing means  
2        releases said neuro-protective drug in an atomized mist that is automatically  
3        inhaled by the individual.

1           5. A system as set forth in claim 1 wherein said dispensing means  
2 releases said neuro-protective drug by automatically injecting the  
3 neuro-protective drug into the bloodstream of the individual.

1           6. A system as set forth in claim 5 wherein said dispensing means  
2 is contained within a body mounted dispensing mechanism.

1           7. A system as set forth in claim 1 wherein said sensing means,  
2 controller and dispensing means are integrally contained within a housing.

1           8. A system as set forth in claim 1 wherein said predetermined  
2 condition is if a force is exerted on the individual that exceeds a predefined  
3 level that would cause injury to the brain and/or spinal cord of the individual.

1           9. A system as set forth in claim 1 wherein said predetermined  
2 condition is a presence of a chemical agent within the environment of the  
3 individual that exceeds a predefined level that would cause injury to the brain  
4 and/or spinal cord of the individual.

1           10. A system as set forth in claim 1 wherein the environment is a  
2 vehicle, and the dispensing mechanism is positioned near the nose of the  
3 individual seated in the vehicle.

1           11. A system as set forth in claim 1 wherein the environment is a  
2 vehicle, and the sensing means is positioned on a vehicle body component, and  
3 the dispensing means is positioned within a vehicle seat.

1           12. A system as set forth in claim 1 wherein the environment is a  
2 vehicle, and the sensing means and the dispensing means are integrally  
3 disposed within a vehicle seat.

1           13. A system as set forth in claim 1 wherein said neuro-protective  
2 drug is from a class of drugs that functionally arrest injury to the central  
3 nervous system of the individual.

1           14. A system as set forth in claim 1 wherein said sensing means,  
2 said controller and said dispensing means are disposed within a protective  
3 headgear, and said neuro-protective drug is inhaled by the individual.

1           15. A method of active neuro-protection for detecting and arresting  
2 traumatic injury to the brain and/or spine of an individual, said method  
3 comprising the steps of:

4           monitoring for a predetermined condition that would induce a traumatic  
5 injury to an individual within an environment using a sensing means;

6           determining if the predetermined traumatic injury inducing condition is  
7 detected by a controller receiving a signal from the sensing means; and

8           dispensing a neuro-protective drug from a dispensing means operatively  
9 in communication with the controller if the predetermined traumatic injury  
10 inducing condition is detected.

1           16. A method as set forth in claim 15 further including the step of  
2 continuing to monitor the environment if the predetermined traumatic injury  
3 inducing condition is not detected.

1           17. A method as set forth in claim 15 wherein said neuro-protective  
2 drug is from a class of drugs that functionally arrest injury to the central  
3 nervous system of the individual.

1           18. A method as set forth in claim 15 further including the step of  
2 remotely monitoring the individual within the environment using a remotely  
3 located computer monitoring system for remotely monitoring the individual  
4 within the environment by receiving an event indicating signal from the

5       sensing mechanism and transmitting a drug releasing signal to the dispensing  
6       means to release the neuro-protective drug if the predetermined condition is  
7       met.

1           19.      A method as set forth in claim 15 further including the step of  
2       locating the dispensing mechanism near the nose of the individual so that the  
3       individual automatically inhales the released neuro-protective drug.

1           20.     A method as set forth in claim 15 further including the step of  
2       locating a body mounted dispensing mechanism on the body of the individual  
3       so that the released neuro-protective drug is automatically injected into the  
4       body of the individual.

1           21.     A method of active neuro-protection for detecting and arresting  
2       traumatic injury to the brain and/or spine of an individual, said method  
3       comprising the steps of:

4           locating a body mounted dispensing mechanism on the body of the  
5       individual, wherein the body mounted dispensing mechanism contains a neuro-  
6       protective drug from a class of drugs that functionally arrest injury to the  
7       central nervous system of the individual;

8           monitoring for a predetermined condition that would induce a traumatic  
9       injury to an individual within an environment using a sensing means;

10          determining if the predetermined traumatic injury inducing condition is  
11       detected by a controller receiving a signal from the sensing means;

12          dispensing the neuro-protective drug from the body-mounted  
13       dispensing mechanism, which is operatively in communication with the  
14       controller, if the predetermined traumatic injury inducing condition is detected;  
15       and

16          continuing to monitor the environment if the predetermined traumatic  
17       injury inducing condition is not detected.

1           22. A method as set forth in claim 21 further including the step of  
2           remotely monitoring the individual within the environment.